(54)   **Method of speech synthesis by means of concatenation and partial overlapping of waveforms**

(57)   Method for speech signal synthesis by means of time concatenation of waveforms representing elementary units of speech signal, in which: at least the waveforms associated to voiced sounds are subdivided into a plurality of intervals, corresponding to the responses of the vocal duct to a series of excitation impulses of the vocal cords, synchronous with the fundamental frequency of the signal; each interval is subjected to a weighting; the signals resulting from the weighting are replaced with a replica thereof shifted in time by an amount that depends on a prosodic information; and the synthesis is carried out by overlapping and adding the shifted signals. In each interval of original signal to be reproduced in synthesis, an unchanging part is identified, which contains the fundamental information and which is reproduced unaltered in the synthesized signal, and the operations of weighting, overlapping and adding involve only the remaining part of the interval.
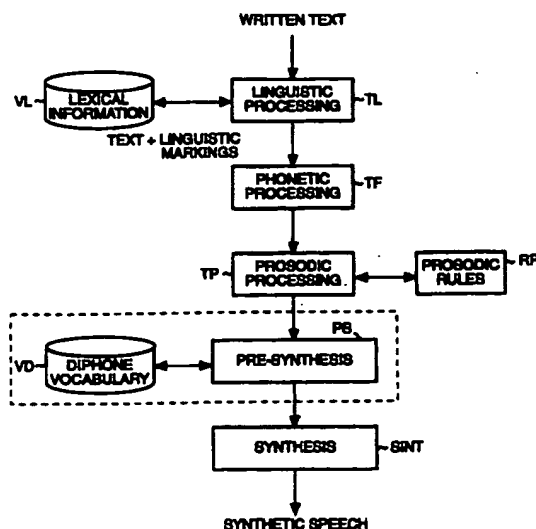
Fig. 1

EP 0 706 170 A3

EUROPEAN SEARCH REPORT

European Patent Office

Application Number

EP 95 10 7944

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
A	ITOH ET AL.: "Phoneme segment concatenation and excitation control based on spectral distortion criterion for speech synthesis" INTERNATIONAL CONFERENCE ON SPOKEN LANGUAGE PROCESSING (ICSLP) 1990, vol. 1, 18 - 22 November 1990, KOBE, JP, pages 189-192, XP000503344 * paragraph 4; figure 4 *	1	G10L5/04
A	WO 85 04747 A (FIRST BYTE) 24 October 1985 * page 17 - page 19, line 19; figures 10-13 *	1	
A	WO 94 07238 A (EMERSON & STERN ASSOCIATES) 31 March 1994 * page 41, line 28 - page 45, line 21 *	1	
A	EP 0 155 970 A (SONY) 2 October 1985 * page 17, line 16 - page 18; figure 7 *	1	
D,A	MOULINES ET AL.: "Pitch-synchronous waveform processing techniques for text-to-speech synthesis using diphones" SPEECH COMMUNICATION, vol. 9, no. 5/6, 1 December 1990, AMSTERDAM, NL, pages 453-467, XP000202900 * the whole document *	1	TECHNICAL FIELDS SEARCHED (Int.Cl.6) G10L
A	HIROKAWA ET AL.: "Segment selection and pitch modification for high quality speech synthesis using waveform sigments" INTERNATIONAL CONFERENCE ON SPOKEN LANGUAGE PROCESSING (ICSLP) 1990, vol. 1, 18 - 22 November 1990, KOBE, JP, pages 337-340, XP000503378 * paragraph 3 *	1	

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	22 September 1997	Lange, J

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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